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FAST PAY

Surge in In-pump Systems

Decision Time On Used Oil

Lucky Lady More Than Just Lucky

NPN
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Regional Sales Offices:
See page facing inside back cover.

Regional News Offices:
East: J. Richard Shaner, P.O. Box 1476, Morristown, NJ 07962-1476. (201) 428-2902
Midwest: Steve Dwyer, 950 Lee St., Des Plaines, IL 60016. (708) 296-0770
South: Angel Abcede, 950 Lee St., Des Plaines, IL 60016. (708) 296-0770
West: Mark Emond, P.O. Box 8130, Anaheim, CA 92812-0130. (714) 774-5598

Editor's Viewpoint

Concern is rapidly growing that the regulatory outflow from the Clean Air Act amendments threatens to create a gigantic boondoggle for the entire petroleum marketing community in the next few years.

Just about everybody in this industry agrees on the need for a national strategy—enforced by commonsense regulations—to achieve desirable clean air standards. With the best of intentions, federal and state rule-making agencies convert the mandate of Congress and state lawmakers into specific regulations and procedures designed to attain those legislative goals.

But somehow this process has gotten skewed, and what should have been a manageable, cost-efficient set of regulations becomes instead a form of bureaucratic overkill, stretching the capability for compliance of many companies in our industry to the breaking point.

Take the new regs on reformulated fuels, for example. As *NPN's* West region editor, Mark Emond, pointed out in last month's detailed cover report, the reformulated specs are spawning a crisis in the refinery industry. Smaller refineries, especially, are on the bubble. Many probably won't survive, leaving marketers in their areas scrambling for new suppliers. Major refiners will survive, but at a cost that will divert many billions of dollars into nongrowth investments for environmental compliance.

If these investments were necessary to protect the air we breathe, the cost would be justifiable. But a growing number of industry voices are being heard that challenge the regulators' assumptions and methodologies.

Texaco USA president James Dunlap, speaking to a California business group, said certain state and federal environmental programs do not meet the test of reasonable cost-benefit requirements. "Much too often, more cost-effective alternatives have been overlooked or dismissed without adequate consideration," he said.

Dunlap offered an example: "An enhanced vehicle inspection and maintenance program, combined with an old car scrappage program, would get rid of 400 tons/day of pollutants at a cost of about $5,000/ton....With the [California Air Resources Board proposed gasoline reformulation], you get rid of 58 tons of pollutants per day at a cost of about $90,000/ton."

Amoco Oil Co. president Bill Lowrie states that research data do not confirm that the Clean Air Act requirements for reformulated fuels will result in cleaner air. He also cites a recent study that concludes that EPA has regulated in ways that require the highest cost for their impact on emissions. "For example, we could reduce benzene in our products for a cost of approximately $400/ton, if we could do it our way," Lowrie says. "But the EPA says we have to do it their way, which is not any better, but which costs $2,000/ton. (For more Lowrie comments, see p8.)

We need clean air. We need cleaner motor fuels. Most of all, we need environmental remedies that will get the job done without sacrificing the competitive vitality of the petroleum marketing industry. That's the message we need to get to our lawmakers.

—Don Smith

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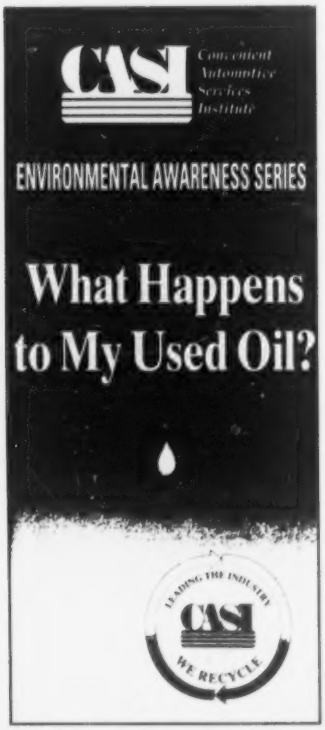

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• TRENDS

Oil Industry Looks For Uplifting Summer

If oil profits begin improving this summer or sooner, it likely won't be because of improvement upstream. Saudi Arabia has the Organization of Petroleum Exporting Countries (OPEC) over a barrel, producing 35% of the group's nearly 23-million b/d, and plans to keep it that way.

When other OPEC countries produce over quotas, as some usually do, the Saudis simply increase their production commensurately. You know the result. Overproduction continues to depress crude oil prices throughout the world, with nothing in sight likely to turn it around. Reference crude oil prices hover at $18/bbl. to $19/bbl., and OPEC's $21/bbl. spring target was an airy dream.

That's the good news. The bad news is that there's always a possibility—however remote at present—that Iraq will begin producing again at something like its former levels. It would be a disaster, plunging crude prices to new depths and forcing a radical restructuring of OPEC quotas.

Because of very weak crude prices, coupled with the need to invest billions in refinery upgrades, oil companies are reducing staff, economizing, selling off, cutting back, shutting down, pulling out and doing other things in a near-desperate effort to bolster earnings.

The oil industry has been under a virtual siege in recent years. Arco chairman and chief executive officer Lodwrick M. Cook pointed out in a speech in April that the industry has lost more than 330,000 jobs during the past decade. He said U.S. government policies, resulting in sharply dropping domestic production and rising imports, are giving OPEC increasing control over U.S. oil supply and prices.

The climate in the United States is hostile to the oil industry. Cook said, "Oil companies are leaving the U.S. because they've lost confidence in the future. They don't think they can make it here anymore.... Even large U.S. firms that traditionally have been tied mainly to the U.S., like Amoco and Phillips, are going. And so is Arco." He added, however, that Arco is not giving up entirely on U.S. oil prospects.

Although prospects for recovery from the recession seem to be improving, the economy remains sluggish, helping to influence oil refineries to operate at their lowest levels in almost five years, the American Petroleum Institute (API) reports. In February, refineries operated at only 79.9% of reports capacity. A year earlier they were operating at 84.4%.

Imports were temporarily down a million b/d below needs, API estimates.

Refiners were drawing down their inventories deeply, about five times more than normal, for several reasons, one being that crude oil prices were so weak. Refiners appeared reluctant to hold excess inventories.

Refiners were reducing gasoline stocks almost to minimum operating levels, mostly because they were moving out higher-RVP (Reid vapor pressure) product to get ready for the lower-RVP gasoline they have to supply in the summer. Some were warning that lower RVPs mean less gasoline and could contribute to tight supplies.

With prospects for continuing tightness, there was hope gasoline prices, at or near three-year lows, would revive this summer, bringing relief downstream to offset, to some degree, the bleak perspectives upstream.

Purvin and Gertz, the Houston consultant, reports the refiner profit margin on Louisiana Light crude processed by a cracking unit on the Gulf Coast increased to 28¢/bbl. in February and was forecast to increase to 70¢/bbl. in March and $1.50/bbl. in April and May.

Key economic indicators hinted that the country was pulling out of the recession. Public confidence was growing a little, suggesting that travel might pick up somewhat this summer.

A decidedly glum U.S. oil industry could use a little cheering up. Companies are running out of things to slash. They need upstream relief to take off some downstream pressure. The coming months and years will test the mettle of everyone.

—Mark Emond

• MARKETPLACE AT A GLANCE

AVERAGE GASOLINE PRICES IN THE U.S. (per gal.)

FEBRUARY	Gasoline (All types)	Leaded Regular	Unleaded Regular	Unleaded Premium
U.S. City Avg.	$1.117	*	$1.054	$1.248
Regions				
Northeast	1.204	*	1.124	1.337
North Central	1.047	*	1.007	1.172
South	1.105	*	1.031	1.217
West	1.138	*	1.092	1.281

** Data no longer collected or available.*
Source: U.S. Dept. of Labor, Bureau of Labor Statistics.

STOCKS (Add 000 bbl.)

	3/27/92	3/29/91
Gasoline (Total)	221,998	211,450
Unleaded*	179,877	164,227
Jet Kerosine	43,690	44,562
Distillates	97,769	97,646
Residual	41,426	43,366

**Leaded regular prices no longer collected by Bureau of Labor Statistics.*
Source: American Petroleum Institute.

Gasoline Oxygenate Supplies Concern Government, Industry

The supply of oxygenates for gasoline blending appears to be adequate for this fall, when a widespread federal mandate goes into effect. MTBE (methyl tertiary butyl ether) and ethanol producers are revving up to meet demand. Ethanol is proving to be a surprising short-term competitor.

Fuel ethanol is making impressive inroads into the gasoline oxygenate market against the prevailing oil-industry preference for MTBE. Given the 5.4¢/gal. federal tax exemption on gasohol (10% ethanol, 90% gasoline), ethanol is cheaper for all but those who manufacture their own MTBE. State exemptions, where they exist, make it cheaper still.

"The conventional wisdom is that MTBE is the oxygenate of choice for oil companies," says Fred Potter, president of Information Resources Inc. (IRI), a specialist in ethanol and reformulated fuels. "The oil industry is against ethanol generally and favorable toward MTBE, but market economics are going to drive out a lot of MTBE."

By his calculation, a gallon of motor fuel oxygenated with ethanol costs about 8¢/gal. less than a gallon blended with MTBE purchased at the market price. For refiners that make their own, MTBE is the cheaper way to go. At present, however, many refiners and blenders have little or none of their own and have to buy MTBE on the outside. Many use ethanol extensively. (The economics are shown in the accompanying box below.)

Perhaps more importantly at present, the U.S. refining industry does not have nearly enough MTBE capacity to oxygenate 40% of the domestic gasoline pool. To make matters worse, feedstocks for MTBE production are in short supply, particularly butane and methane. These shortages have forced some refiners to cut back MTBE production. Utilization rates of 60%-70% are reported in some cases.

This condition, for however long it lasts, evidently is forcing refiners to reevaluate their use of ethanol. Some that have no production of their own are relying heavily or entirely on ethanol to meet their oxygenate needs, at least for the present. If MTBE can eventually be supplied in sufficient quantities, the availability and economics could change.

Ethanol penetration

For economic and other reasons, sales of ethanol blends have increased greatly during the past decade. U.S. production and sales of ethanol were less than 100-million gal. in 1981 and increased to nearly 900-million gal. in 1991.

IRI's Potter expects the U.S. market for ethanol to grow to 1.3-billion gal. to 1.5-billion gal. by 1995, when only reformulated gasoline having an average oxygen content of 2% may be sold in the nine worst ozone nonattaintment areas. Other areas can opt in.

In metropolitan areas where oxygenates are mandated because of excess carbon monoxide (CO) in the air, Potter expects an average of 50% market share for ethanol blends, 50% for MTBE. This is not a forecast, he says, but rather the result of actual case studies.

Seven cities have adopted CO programs since 1988, and the market share of ethanol has grown in most of them. Potter provides these ethanol market shares for 1991: Phoenix 52%, Denver 45%, Albuquerque 95%, Las Vegas 50%, El Paso 98%. When the first CO program started in Denver in 1988, ethanol had only 5% penetration.

Chevron, Mobil and Arco use ethanol in Phoenix. Arco uses both MTBE and ethanol in Las Vegas. Shell, an advocate of MTBE, uses all ethanol in El Paso. "They [Shell] are the last guys you'd think would put ethanol in gasoline," says Potter. "It's economics. They don't want to pay those big numbers for MTBE."

Arco EC-1 reformulated gasoline, with MTBE, led the parade of cleaner-burning gasolines when it was introduced in southern California in September '89. MTBE was the oxygenate most other refiners chose for their reformulated gasolines; however, Arco will use ethanol as its oxygenate this fall in northern California, Oregon and Washington.

Why EIA is concerned

Concern has been widespread that there wouldn't be enough oxygenate available to meet the requirements of the winter of 1992-'93, beginning in November and continuing for at least four months. That's when the federal regulation requiring gasoline to contain 2.7% oxygen by weight goes into effect in about 40 metropolitan areas. Oxygen in gasoline reduces CO emissions.

Because the distribution system scatters oxygenated gasoline into areas where it is not required, an estimated 40% of U.S. gasoline will have to be oxygenated. The Environmental Protection Agency (EPA) could suspend the regulation in any area to avoid critical gasoline shortages when the time comes, but this is no relief for gasoline suppliers and marketers who must prepare to comply with the regulation.

The Energy Information Administration (EIA) is aware that the availability of oxygenates is critical to gasoline supply in these areas. The agency has begun a new oxygenate data collection program, issuing its first report in March 1992 for January and February. The report will be updated monthly.

A key to whether the supply of oxygenated gasoline will be short this fall

Blending Economics of Fuel Ethanol vs. MTBE

	Ethanol Blends	MTBE Blends
Gasoline at $0.70/gal.	$0.647	$0.597
MTBE at $1.25/gal. at 14.73 vol. %	--	0.184
Fuel Ethanol at $1.45 at 7.62 vol. %	0.110	--
Federal Tax at $0.141	0.087	0.141
Total Cost of Motor Fuel	$0.844	$0.922

Note: Federal tax exemption on gasohol is 5.4¢/gal., or 54¢/gal. of ethanol. Table does not include state gasoline taxes or exemptions.
Source: Information Resources Inc.

is in how much is being produced and how much is in storage. The main oxygenates by far are MTBE and ethanol, and the production and stockpiling of both is growing.

EIA does not intend to try to evaluate the data to decide whether the supply of oxygenates is adequate. A spokesman says, "It is not our intention to make any appraisals. We will just let the numbers speak for themselves." The National Petroleum Council is working on a study of the situation for the Department of Energy, but is not expected to complete it until the end of the year, after the November witching hour.

Notwithstanding the lack of governmental appraisals, trade sources recently have generally expressed confidence that the oxygenate supply will be ample this fall. One of the reasons is that ethanol is taking up a lot of the slack. It may be like the man who came to dinner—and stayed. People are getting used to it.

Approximately 900-million gal. of ethanol was available in the United States in 1991, of which 25-million gal. was imported. This oxygenated 9-billion gal. of gasoline blends. IRI's Potter reports there's another 300-million gal. of capacity under construction to meet the November deadline, although later reports at presstime indicate this expanded capacity may be less than anticipated [*NPN*—May '92, p7].

Potter expects an average of 50% market penetration for ethanol in the CO nonattainment areas outside California this fall, MTBE the other half. In northern California, he expects 25% ethanol penetration, MTBE the rest.

Ethanol stocks, production

Not even the EIA, with its sizable manpower and statistical resources, can be at all sure that it has located all of the producers of ethanol, a spokesman says. Remember that the Internal Revenue Service has never been able to find all the mountain stills, which were and are producing white lightning.

In a year-old EIA "frame" study meant to get a handle on U.S. oxygenate production and form the basis for the new monthly reports, there were 42 plants producing ethanol in the country, with a total production of 3.296-million gal./day in January 1991. They projected production of 3.927-million gal./day by January 1992, an increase of 19%.

Most of these plants, 24, are located in the Midwest (PADD II) farm country. Practically all is made from corn. The largest producer in the country by far is ADM, with operations in Illinois, Iowa and North Dakota, then producing 2-million gal./day, or 61% of the national total. A distant second is Pekin Energy Co., Pekin, Ill., with production of 219,000 gal./day.

The East Coast (PADD I) had seven plants; the Gulf Coast (PADD III) six; the Rockies (PADD IV) five; the West Coast (PADD V) five.

In its first monthly oxygenate report in late March, EIA reported that as of Feb. 29, 1992, U.S. stocks of fuel ethanol were 1.149-million bbl., compared with 761,000 bbl. on Dec., 31, 1991, an increase of 388,000 bbl., or 51%, in two months.

Production of fuel ethanol during January and February 1992 averaged 75,000 b/d. This is less than the average 1990 production of 78,500 b/d and may be seasonal. EIA did not attempt to explain the drop. Coming months should shed light on this anomaly.

MTBE production, stocks

Oil refiners generally prefer MTBE if for no other reason than that they make the product themselves. EIA lists 32 MTBE manufacturers in the U.S., and all are petroleum or petrochemical refiners (see table). Some 21 are in the Gulf Coast area, three are on the East Coast, five are in the Midwest, one is in the Rockies, and two are on the West Coast. The list reads like a refiner's who's who.

In January 1991, they were producing 4.417-million gal./day, with 875,000 gal./day of capacity idle, or 17%. The operable capacity they projected for January 1992 was 5.976-million gal./day, which would amount to a gain of 13% during the year. Projected idle capacity was not reported.

EIA said in its first monthly oxygenate report that as a result of additional production capacity coming onstream during 1991, U.S. production of MTBE showed substantial growth, contributing to increased stocks.

Production of MTBE during January and February 1992, 100,000 and 97,000 b/d respectively, was significantly higher than the previously published 1990 average production of 71,000 b/d. This increase was the result of startups of additional MTBE units, EIA said.

MTBE stocks were 8.505-million bbl. on Feb. 29, 1992, compared with 3.599-million bbl. at the end of December 1990, an increase of 4.906-million bbl., or 136%.

MTBE vs. ethanol marketing

Ethanol manufacturing is in the agricultural industry, MTBE manufacturing is in the petroleum industry.

Ethanol blending and marketing is in the domain of marketers, in most cases, MTBE blending in the domain of refiners.

Ethanol is, for the most part, mixed with gasoline in tanktrucks. EIA reports that the number of small gasoline marketers and truckers who engage in this business appears to be large and frequently changing.

Just under nine-tenths of the reported

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Monthly MTBE, Ethanol Production, Ending Stocks by Petroleum Administration for Defense Districts (PADD), 1992

(000 bbl.)

	January		February	
	MTBE	Ethanol	MTBE	Ethanol
Total U.S.				
Production	3,109	2,424	2,819	2,064
Stocks	8,398	939	8,505	1,149
PADD I (East Coast)				
Production	W	W	W	W
Stocks	1,839	60	1,512	72
PADD II (Midwest)				
Production	W	2,254	W	1,929
Stocks	W	443	W	558
PADD III (Gulf Coast)				
Production	2,722	W	2,375	W
Stocks	2,958	248	3,406	340
PADD IV (Rockies)				
Production	W	W	W	W
Stocks	W	9	W	9
PADD V (West Coast)				
Production	W	W	W	W
Stocks	3,201	179	3,247	171

W = Withheld to avoid disclosure of individual company data.
Source: Energy Information Administration (EIA) Form EIA-819, Monthly Oxygenate Telephone Report.

Methyl Tertiary Butyl Ether (MTBE) Plant Capacity by Petroleum Administration for Defense (PAD) Districts

(000 gal./calendar day)

PAD District	Location	Jan. 1, 1991 Operating	Idle	Projected Operable Cap. for 1/1/92
***PADD I* (East Coast)**				
Amerada Hess Corp.	Port Reading, NJ	0	0	50
Amoco Oil Co.	Yorktown, VA	18	0	20
Sun Co. Inc.	Marcus Hook, PA	112	0	112
Total		130	0	182
***PADD II* (Midwest)**				
Amoco Oil Co.	Whiting, IN	140	0	154
Ashland Oil Inc.	Catlettsburg, KY	67	0	75
Conoco Inc.	Ponca City, OK	54	0	54
Marathon Oil Co.	Robinson, IL	0	0	56
Marathon Oil Co.	Detroit, MI	45	0	46
Total		306	0	385
***PADD III* (Gulf Coast**				
Arco Chemical Co.	Channelview, TX	1,260	0	1,260
Arco Chemical Co.	Corpus Christi, TX	0	504	504
Arco/Lyondell	Channelview, TX	336	0	336
Champlin Ref./Chem.	Corpus Christi, TX	60	5	63
Citgo Pet. Corp.	Lake Charles, LA	89	0	85
Conoco Inc.	Westlake, LA	68	0	68
Crown Central Pet.	Pasadena, TX	0	210	210
Diamond Shamrock	McKee, TX	55	0	55
Exxon Chemical	Baton Rouge, LA	232	0	232
Exxon Chemical	Baytown, TX	119	0	108
Fina Oil/Chem.	Big Spring, TX	18	3	18
Hill Petroleum	Houston, TX	63	0	63
Lyondell Petrochem.	Channelview, TX	126	0	110
Mobil Oil Corp.	Beaumont, TX	85	0	93
Phibro Refining	Texas City, TX	0	0	57
Phillips 66 Co.	Sweeny, TX	120	0	120
Star Enterprise	Convent, LA	0	0	92
Texaco Chemical	Port Neches, TX	280	0	388
Texas Petrochem.	Houston, TX	859	0	859
Trans American Ref.	Good Hope, LA	0	147	302
Valero Refining Co.	Corpus Christi, TX	75	0	84
Total		3,845	869	5,107
***PADD IV* (Rockies)**				
Coastal Chemical	Cheyenne, WY	0	0	166
Total		0	0	166
***PADD V* (West Coast)**				
Arco Products Co.	Los Angeles, CA	79	0	71
Chevron USA Inc.	El Segundo, CA	57	6	63
Total		136	6	134
U.S. Total		**4,417**	**875**	**5,976**

Note: Idle capacity is defined as capacity not in operation and not under active repair, but capable of being placed in operation within 30 days; and capacity not in operation, but under active repair that can be completed within 90 days. Operable capacity is the sum of operating and idle capacity.

Source: Energy Information Administration (EIA) Form EIA-822A, Oxygenate Producers Report.

(Continued from page 23)

ethanol blending was performed by operators of bulk terminals, bulk stations, and other like respondents. Operators of refineries did just under one-tenth of reported ethanol blending.

Ethanol manufacturers did very little ethanol blending. The largest proportion of reported ethanol blending occurred in the same region where it was produced. About three-fourths of all ethanol blending took place in the Midwest (PADD II).

More than nine-tenths of the MTBE blended into gasoline was blended by petroleum refiners who either produced the product themselves or purchased it from MTBE manufacturers and merchants. The proportion of self-supplied MTBE was not reported by EIA.

Assessing supply

EIA's reluctance to estimate the adequacy of overall oxygenate supplies is based on several factors:

- Of the oxygenates included in the survey—fuel methanol, MTBE, methanol, TAME (tertiary amyl methyl ether), TBA (tertiary butyl alcohol), and "others"—several have significant other uses, and some, particularly methanol and TBA, are used much more as feedstocks in ether production than in direct gasoline blending.
- The MTBE and ethanol gasoline blends covered in the 1990 study were mostly the traditional ones, not environmental: that is, they were used as gasoline octane enhancers and volume extenders, not emission reducers.
- Oxygenates contain different weights of oxygen. As a result, the volumes blended to meet the regulation differ. To achieve 2.7% oxygen content by weight with MTBE, about 15% of the gallon sold at the pump would be MTBE. Because ethanol contains about twice as much oxygen by weight, only about half as much volume needs to be used.
- Oxygenate production and storage capacities are not uniformly distributed throughout the country. Most are located in the Gulf Coast area and Midwest where only five of the 39 CO nonattainment areas are located. EIA says its studies do not include questions about how oxygenates move to market.
- Other metropolitan areas can opt into the program, and their number cannot be known until areas make a formal request to the EPA. EPA can approve or not, depending on the considered availability of oxygenate supply, which is specific in time and place.

These formidable difficulties have not stopped industry analysts from assessing supply, however. The consensus

(Continued on page 26)

More Marketers Complying With UST Regs, But Financing Still a Problem

More petroleum marketers are making the investment necessary to comply with underground storage tank (UST) regulation, although access to financing for tank replacement and upgrades is becoming more difficult than ever, according to a survey by the Petroleum Marketers Assn. of America (PMAA).

"It is a clear demonstration that marketers recognize the value of being in compliance, both in terms of enhancing their own competitive viability in the market and in meeting their responsibilities to the environment," says PMAA executive vice president Phillip R. Chisholm.

The number of petroleum marketers meeting the financial requirements for compliance with the Environmental Protection Agency's (EPA) comprehensive underground storage tank regulations has increased significantly in 1991 over the previous year, the survey shows. But it also shows that major problems still exist for marketers in the areas of remediation and in obtaining bank financing.

The survey finds that total UST expenses for all marketers averaged 2.8¢/gal. of petroleum sales in 1991, and the results suggest that marketers expect to be spending at about the same rate this year.

The average expenditure by those marketers who spent money in 1991 to insure, upgrade or replace underground tank systems was more than $96,000. That excludes remediation, which averaged $154,000 for the 40% of the respondents that said they did cleanups last year. Per site clean up costs averaged more than $57,000, up from $54,000 in 1990.

Most of the progress by marketers came in the area of financial responsibility compliance. At year end 1991, more than 83% of the marketers surveyed said they were covered by a state fund, up from 68% for the previous year.

The study shows that state funds, while much cheaper than private insurance, do not come free, and there is a wide variation in the cost to marketers in different states. Marketers report paying an average of more than $7,700 in state fund fees during 1991, compared with paying $6,400 in 1990. The fee per tank covered averaged $480 in 1991, up from $364 the previous year.

Respondents project that the average fee per tank will increase further in 1992 to $606. The study finds that marketers also are utilizing other financial tools available to establish financial assurance, such as letters of credit and surety bonds, primarily in combination with a state fund.

Private insurance continues to be a costly means of demonstrating financial responsibility, the study finds. Marketers with full coverage pollution liability insurance (PLI) policies report spending an average of $32,500 in 1991 for premiums, or nearly $1,300/tank. While these levels of private PLI coverage are down from the previous year ($37,500 average and $1,800/tank), so few marketers reported having full coverage PLI last year that the averages are based on a limited number of responses. However, the 1991 average premium is still more than 70% higher than in 1988.

According to the PMAA survey, the number of marketers without any means of assurance fell to 8%, less than a third of what it was in 1990. PMAA said that, for the most part, the 8% of marketers reporting no coverage were Category IV tank owners (with less than 13 tanks) and thus not required to be in compliance until the end of 1993.

The study found that the marketing industry is expending "vast amounts" of capital on USTs at a time it is facing an unprecedented credit crunch.

Respondents reported a continuing problem in obtaining credit from traditional lending institutions to finance tank replacements and upgrades. "Banks are increasingly unwilling to loan money for any type of UST-related expense because of liability concerns," the study says.

The PMAA reports that the problem has become so acute that fewer marketers are even applying for loans because their bankers have told them not to bother.

Only 27% of the respondents reported that they applied for a loan in 1991 and about a third of those applications were rejected, the study finds.

The survey shows that delays by regulatory authorities continue to hamper cleanup efforts. More than 50% of the marketers report "bureaucratic delays" in plan review and approval. More than 45% report delays in closure review and approval while 40% said delays occurred in the hazard determination of the soil or the groundwater. Delays also are reported by marketers in the site inspections and the permit approval process.

Tank and station closure remained a viable compliance option for many marketers in 1991, according to the survey. Marketers report a closure rate of more than one-fourth of their total outlets for the period 1989-'92. In each of those years, nearly 40% of the marketers report closing at least one UST, with closures averaging more than six per marketer. Local, state and federal UST requirements were cited for three-fourths of the closures. Although many survey respondents did not attempt to project future trends, data from the survey suggest that marketers may close an additional 7-8% of their tanks this year.

The study finds a similar pattern in closures of retail outlets. Marketers report owning 8.2 retail outlets in 1991, down 11% compared with the 9.2 outlets owned in 1989. Total outlets closed during the period, however, represent almost one-quarter of the 1989 total, PMAA says.

Marketers attribute the majority of outlet closures to the costs of complying with local, state and federal UST regulations. A total of 66% of all outlets closed between 1989 and 1991 were closed as a direct result of UST regulations, while 19% reportedly were closed after generating insufficient revenues.

The 1992 PMAA UST survey was sent to 2,000 randomly selected marketers across the country. About 220 marketers operating in 42 states returned the survey. In 1991, they owned nearly 6,600 USTs, almost 1,800 retail outlets, and sold an average of 8.7-million gal. of motor fuel.

—Phil Shook

(Continued from page 24)

as it is known, is that there will not be a shortage generally, although there might be some shortages or outages locally.

For marketers who cannot obtain oxygenated gasoline from their suppliers in nonattainment areas, the availability of ethanol should be a major concern. Stocks of ethanol vary widely by region. In February 1992, with 558,000 bbl. of ethanol in storage in the Midwest and 340,000 bbl. in the Gulf Coast area, the West Coast had 171,000 bbl., the East Coast 72,000 bbl., and the Rockies 9,000 bbl. Regional production and stock variations for MTBE and ethanol are shown in an accompanying table.

With six EIA reports (May-September) still to come out before the end of October, the picture should clarify. Monthly figures on MTBE and ethanol production and stock variations will presumably point to supply improvement. EIA might even be emboldened by growing experience to hazard some useful appraisals. If EIA doesn't, others will, including most refiners.

—Mark Emond

Decision Time Nears on Used Oil Hazardous Waste Listing

The deadline draws near for the Environmental Protection Agency (EPA) to make a final ruling on whether used oil should be listed as a hazardous waste. But many of the nation's quick lube operators, automotive service providers and petroleum marketers are equally concerned about decisions on management requirements—issues that could remain unresolved for months.

After 12 years of regulatory and legislative debate, the industry had hoped all of these issues finally would be concluded this spring. But President Bush's decision to declare a 90-day moratorium on federal regulation has delayed decisions on management requirements.

Larry Northup, executive director of the Convenient Automotive Services Institute (CASI), whose members operate about 2,600 quick lube stores across the country, calls the delay a setback for the industry. A further holdup in reaching a decision on management standards "invites congressional action, which tends to be a bit more confusing," Northup says.

Northup says he suspects that EPA is leaning toward a decision against the classification of used oil as a hazardous waste, but it would come without having the management standards set in place to back up the decision.

He says the EPA has received comments from the general public and industry this fall that "were overwhelmingly in favor of a nonlisting solution to this problem."

The many opponents of the listing of used oil as a hazardous waste constitute a virtual who's who of the petroleum marketing industry, including major oil companies, independent marketers, retailers, quick lube operators and recyclers. Many of these companies have instituted used oil recyling programs, which they insist would be negatively impacted by a hazardous waste listing.

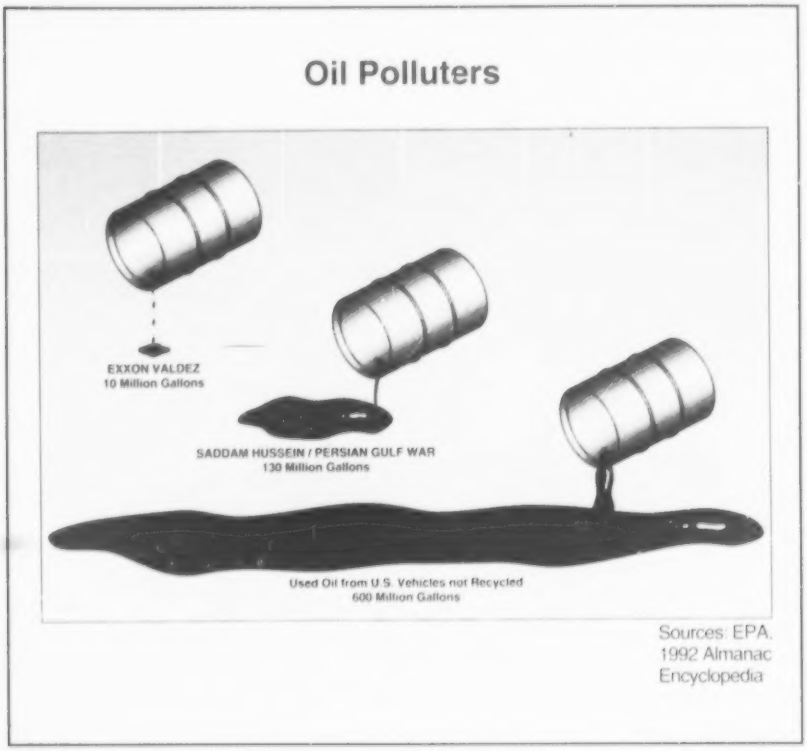
"EPA is leaning toward a nonlisting; unfortunately Congress isn't....That's the scary part," says Craig Nelson, operator of three Jiffy Lube stores in the Chicago area. Nelson says Congress is trying to "micromanage this entire industry not only by putting legislation into effect that will label used oil as hazardous, but also by trying to legislate specific management standards." The incremental costs to the industry of poorly thought out management standards would be substantial for the industry, Nelson says. He says the legislation doesn't address the improper disposal of some 450-million gal. of used oil annually—what he and others in the industry call the country's real problem with used oil.

By Phil Shook
Staff Reporter

Willy-nilly standards?

EPA has spent many years trying to develop management standards, Nelson says. "But Congress is just sort of willy-nilly plucking out certain sections of existing and proposed management standards and putting in those they feel t o

Lube 'n Go, El Paso, Texas, uses a series of CASI pamphlets to promote the company's recycling efforts.



Every year in the United States, 60 times the amount of oil from the Exxon Valdez spill is disposed of improperly.

be politically correct and leaving out those they don't."

Congressional tinkering with management practices would load the burden on the industry, Nelson says. "It would do nothing to solve the problem or deal with Joe Citizen who changes his oil and dumps it down the sewer."

CASI's Northup says a decision not to list oil as a hazardous waste by the EPA would have to be backed up by the development of used oil management standards for the industry.

Northup says there is a fear that without management standards, the EPA will have a harder time justifying a no listing stand.

The other problem with the absence of management standards is that built into federal law is an exemption from Superfund liability for motor oil installers who abide by management standards and collect do-it-yourselfer (DIYer) oil. But since there never have been any mandated management standards, the exemption has never been triggered.

Northup says the industry had been looking forward to the May decisions so there would finally be some management criteria that would allow the Superfund exemption to be triggered. "Now it looks like we will not get the management standards, so we won't get that exemption either. It kind of fouled things up," Northup explains.

He says ultimately the industry will get the management standards, but it is now unclear when that will be. "We were on the verge of knowing what was going on and being able to deal with it. But now we are back to square one where we don't know," Northup says. "It is frustrating and also costly."

Northup says what EPA was asking for in proposed management standards already is being done by quick lubes as well as by most dealers and service stations. "They looked on them as sort of simple housekeeping chores."

Northup says, for example, that quick lube operators, or "generators," already are abiding by current regulations pertaining to storage tanks, that they are keeping track of used oil shipments off site and that they are complying with regulations prohibiting the mixing of used oil with hazardous wastes.

Among the management standards that Northup says "they could throw at us" are limitations on the storage time that operators would have to keep used oil on site. "That could pose a problem for some," Northup says. He says fast lube operators also are concerned about the passage of "strange and new" restrictions on underground or aboveground storage tanks that could include cumbersome testing requirements.

Waste heater threat

In addition, quick lube operators in the northern states also are facing possible prohibitions or restrictions on the use of used oil in space heaters. Environmental groups are seeking controls on used oil-fired space heaters (not only by quick lube operators, but also in boilers at schools, hospitals, apartment buildings and offices), which they say emit significant amounts of lead into the atmosphere.

While the management practices issue remains clouded, Northup says it is unlikely that EPA will rule to classify used oil as a hazardous waste. He says the listing of used oil as hazardous has been opposed by a number of industry groups representing thousands of quick lube operators, auto parts manufacturers and distributors, petroleum marketers and service station dealers.

The EPA is considering three options on used oil, and two of those options would result in some or all of used oil being declared hazardous.

"An across-the-board or partial listing of used oil [as a hazardous waste] would seriously upset a recycling system that currently works," says a spokesman for the Automotive Service Industry Assn. (ASIA). "We don't think the hazardous listing will do anything beneficial to the environment," Nelson says. On the other hand, he says, "it would cause orders of magnitude in increases in improper disposal," he says.

If used oil was listed as a hazardous waste, there is no question that there would be a dramatic increase in the cost of disposal just because of all the requirements that are imposed on a handler of hazardous waste, says Shane Smoot, environmental counsel for Quaker State Minit-Lube. The Salt Lake City-based company operates 452 fast lube stores in 26 states and Canada.

Smoot says a listing of used oil as hazardous would completely ignore the most serious problem—indiscriminate disposal of used oil by DIYers. "The higher the cost of disposing of used oil, the less likelihood there is that the DIYer issue will ever be resolved," Smoot says.

Smoot says a classification of oil as a hazardous waste would disrupt the important role that quick lube operators and other petroleum marketers now play in recycling used oil. In most instances, quick lube operators either receive consideration for the oil or they will pick it up for nothing. "There are areas of the

country where there is a minimal cost for disposing of the oil, but the listing would throw that completely out of whack and the cost would go up dramatically," Smoot says. "Right now there is a large gap between the cost of disposing of used oil and the cost associated with disposing of hazardous waste."

Smoot says it is likely that a listing of used oil as a hazardous waste would come with exemptions for recycling. But recycling would be much more expensive because anything the used oil touches such as hand towels and filters would then also become a hazardous waste.

Larry Bartlett, president of CASI and operator of 10 quick lube stores in Texas and New Mexico, says a listing of used oil as hazardous would be counterproductive, drastically reducing the number of recyclers because of permitting requirements.

"I don't know which way the EPA is going to jump but I would like to see them make a decision and come out with management standards so we can get on with our lives."

Glenn Morris, operator of several quick lube stores in California, says an EPA listing would not affect him since California has required the recycling of used oil as a hazardous waste since the early 1980s.

But Morris says a nonlisting of used oil could have the beneficial effect of lowering liability insurance for quick lube operators and others in the industry. "I would hope insurance companies would look at [a nonlisting] and not tax us as hard," he says.

Jiffy Lube's Nelson points out that a hazardous waste listing designation for used oil at a state level is nothing in comparison to a federal hazardous listing.

"Right now the people in the California Waste Control Section can just ship [the used oil] over state lines," he says.

Different opinions

Some companies directly involved in the recycling, refining and re-refining segments of the industry differ on how they think used oil should be regulated. Some of the recyclers also have reached different conclusions on the levels of lead emissions from used motor oil.

The National Oil Recyclers Assn. (NORA), an organization of approximately 75 used oil recyclers and rerefiners, is opposed to the classification of used oil as a hazardous waste. The group's membership includes companies that process more than 300-million gal. of oil annually. NORA counsel James Hoeskema Jr. says the association is committed to the safe and effective management of used oil, but that no additional protection will be achieved by classifying used oil as a hazardous waste.

The Environmental Coalition, an industry group that includes Safety-Kleen and Evergreen Oil—two large re-refining companies—and the Hazardous Waste Treatment Council, support the listing of used oil as a hazardous waste.

John Feeley, a spokesman for Safety-Kleen, a recycler that processed about 100-million gal. of used oil last year, says coalition members have pointed out the harm that could result in the mismanagement of used oil. The coalition also cites a congressional conference report on hazardous waste in 1984 that stated, "It was never Congress' intent that protection of human health and the environment be subordinated to the continuation of used oil recycling activities."

Many major oil companies have instituted used oil collection programs. A hazardous waste classification would seriously jeopardize the existence of such programs. (Courtesy Amoco Oil Co.)

Safety-Kleen and other members of the Environmental Coalition propose that:

- Used oil be listed as a hazardous waste after it is picked up for recycling or disposal, but that the hazardous designation would be removed for used oil that is recycled to meet prescribed health and safety standards. This would allow the oil, according to the coalition propsal, to be sold as a commercial product without subjecting customers to requirments of the Resource Conservation and Recovery Act (RCRA).
- Used oil "generators" be required to dispose used oil in accordance with (RCRA) hazardous waste regulations or deliver the oil to a recycler. Under the proposal, the generator would have to retain a copy of the manifest or recycling contract. Petroleum refineries would be allowed to re-refine any used oil generated on site without being subject to additional permitting requirements.
- Petroleum marketers would face no additional requirements under the coalition's proposal unless they are engaged in blending used oil with virgin oil for resale. In that case, they would have to comply with the requirements that apply to recyclers.

According to Safety-Kleen's Feeley, service stations, petroleum marketers and consumers would not be subject to "burdensome new requirements" if used oil is listed as a hazardous waste, if the listing occurs after oil is collected for recycling and if the listing designation is removed once the oil is re-refined or reprocessed to meet environmental specifications.

Feeley says a recycling facility would be required to obtain a RCRA Subtitle C permit, but could do so within a reasonable time frame and without undue expense. He says EPA could develop a standardized model permit that could move oil recycling facilities through the application process quickly. "Streamlined procedures can reduce individual permitting costs to as little as $50,000," he says.

NORA's Hoeskema contends that some industry groups, including the Hazardous Waste Treatment Coucil, stand to gain economically "by charging high prices to dispose of used oil if it was designated a hazardous waste."

NORA also blasted the findings of a research report released by the Hazardous Waste Treatment Council stating that waste motor oil contains as much as 100-ppm (parts per million) of lead. According to a member of the enviornmental coali-

tion, the EPA prohibits burning hazardous waste fuels containing more than 10-ppm of lead.

Richard Fortuna, executive director of the Hazardous Waste Treatment Council, says 16-million gal. of used oil were sampled in the study entitled *America's Undiscovered Lead Threat*, and it was the "most comprehensive survey and sampling of used oil ever conducted."

A spokesman for NORA says its own survey reveals that the average lead concentration in used oil fuel sold to burners is 34.35-ppm, "and most of that lead will be removed by air pollution control devices before it enters the air."

On the legislative front, Rep. Ike Skilton (D-Mo.) has received more than 175 co-sponsors to his used oil bill HR 1411, which would require the EPA to set management standards without a hazardous waste listing, promote recycling through education, seek to reduce dependence on foreign oils and require procurement of used oil fuels by government agencies whenever possible. Reps. Cardiss Collins (D-Ill.) and Dennis Hastert (D-Ill.) have recently introduced a bill that would require that used oil be listed as a hazardous waste.

Collins also says she will introduce legislation to ban burning of untreated used motor oil in all space heaters, even if stations collect their own oil. Her bill would set limits for lead, arsenic, cadium and chromium levels in recycled oil. Under the proposed bill, recyclers would not be allowed to dilute used oil with virgin oil to meet these requirements.

Filters important, too

The handling of used oil filters – the subject of proposals on the federal and state level – is a related issue that is critical to the fast lube industry. On the federal level, Northup says CASI endorses the EPA proposal exempting filters that have been mechanically crushed.

The industry group says, however, that the exemption should be expanded to include filters that have been either gravity drained or disassembled. "Both of these treatment methods remove the majority of a filter's 'free-flowing' oil and both, we believe, will allow the filter to easily pass the agency's own toxicity characteristics test," Northup says.

Jiffy Lube's Nelson says most installers today "are, at the very minimum," draining their oil filters before they are sent to landfills.

"Many of us are crushing them and recycling them and the [filter] recycling industry is such a fledgling industry and so fragile right now that any further restrictions would kill it," Nelson says.

On the state level, oil filters have been banned from landfills in California for more than a year, and starting in July, Texas will begin a phased-in ban on sending any filters to landfills.

Industry sources say that Florida, Washington and Massachusetts are studying the filter issue and could follow Texas and California with restrictions that effectively mandate the recycling of used oil filters.

To comply with the state regulations, California quick lube operator Glenn Morris crushes filters, places them in 55 gal. drums and has them hauled off for recycling as scrap metal.

El Paso quick lube operator Bartlett says the first implication of the new Texas rule is that it only addresses one sector of the market – the installers and not the retailers who sell filters.

"Obviously it will drive up our costs or cause the marginal customer to become a DIYer or extend service intervals, one or the other," Bartlett says.

He says industry surveys have shown the installed market represents somewhere around 40-45% of the total oil filter sales, while DIYers account for 50-55%. "So we are bearing the total cost of the program and less than half of the market is even being addressed," Bartlett says.

Quaker State Minit-Lube's Smoot says oil filter recycling is still in its earliest stages, but state regulators are focusing on the following key issues:

- Concern about residual oil getting to the landfill. (You can drain a filter for 24 hours and you are still not going to get all of the oil out, Smoot says. "There is still a certain amount trapped, and that concerns the regulators," he says.)
- The realization that there is a recycling potential with the filters; therefore, regulators want to see the metal recycled.
- The need to reduce the volume of all materials going to landfills. Smoot says California and Texas are premature in setting standards for the handling of oil filters. "They are deciding the remedy and not allowing industry the opportunity to work with various parts of the marketplace to develop the most efficient approach," he says. "They put in place regulations that do not allow for further development of alternative kinds of recycling and disposal.

Shirley Gault, a Hoffman Estates, Ill., Mobil station manager, points to a highly visible sign encouraging used oil recycling.

Smoot says it is frustrating when government, rather than providing a standard for the industry to live up to, mandates a remedy. He says this has a stifling effect on further development of more economic means of dealing with the problem. For example, Smoot says, regulators are becoming increasingly aware of the impact of filters in the hands of DIYers. "They recognize the biggest problem out there is the DIYer." He says the issue, however, is a "political hot potato" because "you don't put penalties on a household and what people put in their garbage can."

By forcing a particular remedy on the quick lube industry, Smoot says regulators shut the door on any public filter collection program.

Smoot explains that the quick lube industry can act as a "cornerstone" to a public filter collection network, but there has to be some incentive to participate. CASI's Northup agrees: "Even with exemptions for draining, crushing and other treatments, the central problem with used filter management remains the lack of a stable and financially viable recycling outlet."